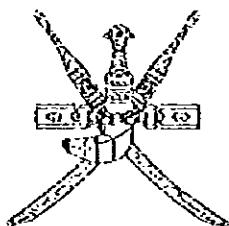


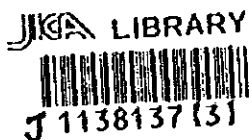
**SULTANATE OF OMAN**  
**MINISTRY OF COMMUNICATIONS**  
**DIRECTORATE GENERAL OF ROADS**



**CONSTRUCTION OF  
FLYOVER  
AT  
NASEEM GARDEN ROUNDABOUT  
BATINAH HIGHWAY**

**TENDER DOCUMENTS**

**BILL OF QUANTITIES**



SSF
CR(5)
97-015

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
5800 S. UNIVERSITY AVENUE  
CHICAGO, ILLINOIS 60637

PROFESSOR J. H. GOLDSTEIN  
DEPARTMENT OF CHEMISTRY  
5800 S. UNIVERSITY AVENUE  
CHICAGO, ILLINOIS 60637

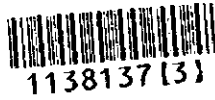
DEAR PROFESSOR GOLDSTEIN:

PLEASE FIND ENCLOSED

THE RESULTS OF MY RESEARCH  
ON THE CHEMISTRY OF

**CONSTRUCTION OF FLYOVER AT  
 A'NASEM GARDEN  
 BILL OF QUANTITIES  
 BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>SECTION 100 PRELIMINARIES</b>						
	<b>101 Bonds and Insurance</b>						
101.1	Performance Bond (Clause 10 of Standard Conditions of Contract)	lump sum					
101.2	Insurance of the Works (Clause 21 of Standard Conditions of Contract)	lump sum					
101.3	Damage to Persons and Property (Clause 22 of Standard Condition of Contract)	lump sum					
101.4	Third Party Insurance (Clause 23 of Standard Conditions of Contract)	lump sum					
101.5	Accident or injury to Workmen (Clause 24 of Standard Condition of Contract)	lump sum					
			1-1	Carried to summary		44250.000	



1138137(3)

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	104 Facilities for the Engineer						
104.1	Provision of Engineer's office (Type A, 1 unit x 20)	month	20	250.000		5000.000	
104.2	Maintenance of Engineer's office (Type A, 1 unit x 20)	month	20	150.000		3000.000	
104.3	Provision of surveying instruments	month	18	300.000		5400.000	
104.4	Maintenance of surveying instruments	month	18	150.000		2700.000	
104.5	Provision of Engineer's accommodation						
	(i) Resident Engineer's accommodation (Type B, 2 unit.)	month	38	250.000		9500.000	
	(ii) Engineer's accommodation (Type C, 4 units )	month	74	150.000		11100.000	
	(iv) Dining/Kitchen (Type D, 1 unit x 18)	month	18	250.000		4500.000	
1-2				Carried to summary		41200.000	

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
104.6	Maintenance of Engineer's accommodation (i) Resident Engineer's accommodation (Type E, 2 units) (ii) Engineer's accommodation (Type C, 4 unit ) (iv) Dining/Kitchen (Type D, 1 unit x 18)	month month month	38 74 18		150.000 250.000 250.000		5700.000 18500.000 4500.000
104.7	Provision of laboratory	month	18		400.000		7200.000
104.8	Maintenance of laboratory	month	18		150.000		2700.000
104.10	In situ soil bearing capacity tests	n.r.	20		20.000		400.000
104.11	Sub-soil investigation by specialist Contractor	prov. sum			8,000.000		8000.000
			1-3		Carried to summary		47000.000



**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
105.1	105 Assistance for Engineer Laborers to assist the Engineer ( no x months)	man month	N/A			
106.1	106 Contractor's Compound Mobilization and demobilization of Contractor's facility	lump sum				100000.000
106.2	Maintenance of Contractor's facility	month	18	5,000.000		90000.000
107.1	107 Maintenance and Protection of Traffic Maintenance and protection of traffic	lump sum				100000.000
107.2	Extra over item 107.1 for supply and compaction of subbase on diversions where ordered by the Engineer (10 cm. thick)	cu. m.				
107.3	Extra over item 107.1 for supply and compaction of bituminous basecourse on diversions where ordered by the Engineer ( 3 cm. thick)	cu. m.				
			1-4	Carried to summary		290000.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>108 Progress Photographs</b>						
108.1	Provision of negatives and 5 sets of photographs (14 photos max.) (Mountable-Size 100 x 150 mm.)	month	18		30.000		540.000
	<b>109 Sign Boards</b>						
109.1	Provision, erection, moving and maintenance of signboard (Wooden Type)	n.r.	2		300.000		600.000
	<b>110 Commemoration Plaque and Opening Ceremony</b>						
110.1	Supply and erection of commemoration plaque (Optional)	n.r.	1		option		
110.2	Opening ceremony (Optional)	lump sum					
			1-5		Carried to summary		1140.000

CONSTRUCTION OF FLYOVER AT  
 ANASEM GARDEN  
 BILL OF QUANTITIES  
 BILL 1 - PRELIMINARIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
115.1	<p>115 Compliance with the Tender Documents</p> <p>Allow for all costs and expense for complying with all the conditions and requirements stipulated in the Tender Documents, including all Clause of the Standard Conditions of Contract, which the Tenderer considers have financial implications on his tender and which are not covered separately in the various pay items of the Bill of Quantities</p> <p>Clause No .....</p> <p>Clause No .....</p> <p>Clause No .....</p> <p>Clause No .....</p> <p>Clause No .....</p> <p>Clause No .....</p> <p>Clause No .....</p>	<p>lump sum</p> <p>lump sum</p> <p>lump sum</p> <p>lump sum</p> <p>lump sum</p> <p>lump sum</p> <p>lump sum</p>				

Carried to summary

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 1 - PRELIMINARIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 1-1					44250.000	
	Page 1-2					41200.000	
	Page 1-3					47000.000	
	Page 1-4					290000.000	
	Page 1-5					1140.000	
	Page 1-6					0.000	
				1-7	To Ground Summary		423590.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	<b>200 EARTHWORKS</b>					
	<b>201 Clearing and Grubbing</b>					
201.1	Removal and delivery of trees of 300mm trunk diameter or greater	n.r.	69	15.000		1035.000
	<b>202 Removal of Structures and Obstructions</b>					
202.1	Removal of existing building (Shop)	n.r.	1	200.000		200.000
202.2	Removal of misc. reinforced concrete structures	cu. m.	34	5.000		170.000
202.3	Removal of pipe culvert (D=0.6,0.75,0.9)	lin.m.	248	2.000		496.000
202.4	Removal of asphaltic concrete pavement (100 mm thick)	cu. m.	5771	2.000		11542.000
202.5	Removal of damaged steel safety barrier (Guardrail)	lin.m.	2806	1.800		5050.800
			2-1	Carried to summary		18493.800

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
202.6	Remove carefully and relocate sign boards and road signs (size)	n.r.	42	3.500		147.000	
202.7	Removal of damaged Irish crossing marker posts	n.r.	N/A	2.500			
202.8	Removal of damaged drainage protection works (gabions, conc. tiles, mortared riprap, dry rip rap)	cu. m.	N/A	3.500			
202.9	Removal of existing fences (wire mesh, chicken wire)	lin.m.	N/A	1.500			
202.10	Removal of existing fences (block or masonry wall)	lin.m.	324	2.000		648.000	
202.11	Removal of existing box culvert (2 x 1 m)	lin.m.	43	5.000		215.000	
202.12	Removal of existing interlocking tiles	sq. m	1040	1.200		1248.000	
202.13	Removal of existing crush stone	lin.m.	N/A	1.000			
202.14	Removal of existing plain concrete	cu. m.	81	2.000		162.000	
202.15	Removal of Curb Stone	m	1057	1.500		1585.500	
			2-2	Carried to summary		4005.500	

**CONSTRUCTION OF FLYOVER AT  
A'NASEM GARDEN  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
203.1	203 Earthworks Excavation Suitable excavation to embankment	cu. m.	18430	0.600		11058.000
203.2	Suitable excavation to waste	cu. m.	N/A	0.300		
203.3	Unsuitable excavation to waste	cu. m.	N/A	0.400		
203.4	Borrow excavation to embankment	cu. m.	62000	1.500		93000.000
203.5	Extra over item 203.1, 2, 3 for excavation under water	cu. m.	N/A	3.000		
206.1	206 Excavation and Backfilling for Structures Structure excavation in soils to a depth of 2m	cu. m.	370	1.000		370.000
206.2	Structure excavation in soils to a depth more than 2m	cu. m.	N/A	1.700		
			2-3	Carried to summary		104428.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
206.3	Structural excavation in rock to a depth of 2m	cu. m.	N/A				
206.4	Structural excavation in rock to a depth more than 2m	cu. m.	N/A				
206.5	Extra over 206.1,2,3,4 for excavation under water	cu. m.	N/A				
206.6	Structural Excavation in soils to waste	cu.m	N/A				
				2-4		Carried to summary	
						0.000	



CONSTRUCTION OF FLYOVER AT  
A'NASEM GARDEN  
BILL OF QUANTITIES  
BILL 2 - EARTHWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 2-1					18493.800
	Page 2-2					4005.500
	Page 2-3					104428,000
	Page 2-4					0.000
				2-5	To Grand Summary	126927.300

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 3 - GRANULAR AND STABILIZED SUBBASE, BASE COURSE, STABILIZED SUBGRADE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	<b>300 GRANULAR AND STABILIZED SUBBASE, BASECOURSE AND STABILIZED SUBGRADE</b>					
	<b>302 Granular Subbase</b>					
302.1	Granular subbase (class B) (150 mm thick)	cu. m.	2347	2.000		4694.000
	<b>303 Aggregate Basecourse</b>					
303.1	Aggregate basecourse (class B) (300 mm thick)	cu. m.	N/A	3.600		
303.2	Aggregate basecourse (class B) (250 mm thick)	cu. m.	N/A	3.200		
303.3	Aggregate basecourse (class B) (200 mm thick)	cu. m.	10239	2.700		27645.300
303.4	Aggregate basecourse (class B) (150 mm thick)	cu. m.	1879	2.500		4697.500
		3-1		Carried to summary		37036.800

**CONSTRUCTION OF FLYOVER AT  
 A'NASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 3 - GRANULAR AND STABILIZED SUBBASE, BASE COURSE, STABILIZED SUBGRADE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					\$7036.800
	Page 3-1					

3-2	Carried to summary	\$7036.800
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CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 4 - BITUMINOUS PAVEMENT

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount		
				R.O.	Bz	R.O.	Bz	
400 BITUMINOUS PAVEMENT								
401 Bituminous Prime Coat and Tack Coat								
401.1	Bituminous prime coat (MC 70)	kg	50982	0.250		12745.500		
401.2	Bituminous tack coat (RC 250)	kg	10239	0.300		3071.700		
402 Bituminous Basecourse								
402.1	Bituminous basecourse (class B) 50 mm.thick	cu. m.	1103	22.000		24266.000		
402.2	Bituminous basecourse (class B) 100 mm.thick	cu.m.	2912	28.000		81536.000		
402.4	Increase or decrease in bituminous content from nominal rate	kg	rate only	0.050				
				4-1		Carried to summary		121619.200

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 4 - BITUMINOUS PAVEMENT

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	405 Bituminous Wearing Course					
405.1	Bituminous wearing course (class B) (50 mm thick)	cu. m.	3442	28.000		96376.000
405.2	Increase or decrease in bitumen content from nominal rate	kg	rate only	0.050		
				4-2	Carried to summary	96376.000

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 4 - BITUMINOUS PAVEMENT

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 4-1					121619.200
	Page 4-2					96376.000
		4-3			Carried to summary	217995.200

**CONSTRUCTION OF FLYOVER AT  
ANASEEM GARDEN  
BILL OF QUANTITIES  
BILL 5 - CONCRETE AND CONCRETE STRUCTURE**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
500	CONCRETE AND CONCRETE STRUCTURE						
504	Concrete for Structure						
504.1	Concrete Class 16/20 (OPC cement) Blinding, Gravity Wall	cu. m.	2548		30.000		76440.000
504.2	Concrete Class A 24/20 for retaining wall, abutment and piers (OPC)	cu.m	9957		35.000		348495.000
504.3	Concrete Class 32/20 for bridge deck, cross beam and joint	cu.m	383		50.000		19150.000
504.4	Cast-in-Situ Concrete Class 24/20 for bridge deck for cantilever	cu.m	1080		38.000		41040.000
			5-1	Carried to summary			485125.000

CONSTRUCTION OF FLYOVER AT

A'NASEM GARDEN

BILL OF QUANTITIES

BILL 5 - CONCRETE AND CONCRETE STRUCTURE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
506.1	506 Prestressed Concrete for Bridge <u>Precast pre-stressed bridge beam reinforced concrete class AA40 including all reinforcement tendons tension cable strands approved anchorage points "Freyssinet" system or equal and approved sheaths de-watering pipes grouping in accordance with manufacturers recommendations all complete and as detailed on tender drawings</u>						
	a) PS Box girders (Internal), 32 m long	n.r.	154	3,300.000		508200.000	
	b) PS Box girders (External), 32 m long	n.r.	44	3,600.000		158400.000	
				5-2	Carried to summary	666600.000	



CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 5 - CONCRETE AND CONCRETE STRUCTURE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	509 Reinforcing Steel					
509.1	High yield steel bar reinforcement of any diameter	tone	815	285.000		232275.000
509.2	Mild steel bar reinforcement of any diameter	tone	N/A	300.000		
509.3	Mesh reinforcement of any size	tone	N/A	400.000		
			5-3	Carried to summary		232275.000

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 5 - CONCRETE AND CONCRETE STRUCTURE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 5-1					485125.000	
	Page 5-2					666600.000	
	Page 5-3					232275.000	
				5-4	Carried to summary		1384000.000

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 6 - STRUCTURAL STEEL AND OTHER METALWORK

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
603.1	600 STRUCTURAL STEEL AND OTHER METALWORK 603 Bridge Parapets Bridge Handrails (Aluminum) (H=500 mm)	lin.m.	2320		45.000		104400.000
			6-1	Carried to summary			104400.000

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 6 - STRUCTURAL STEEL AND OTHER METALWORK

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 6-1					104400.000
				6-2	Carried to summary	104400.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 8 - DRAINAGE AND SERVICE DUCTS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>800 DRAINAGE AND SERVICE DUCTS</b>						
	<b>S01 Pipe Culverts</b>						
S01.1	Reinforced concrete pipe culvert ( 600 mm. dia.)	lin.m	100	35.000		3500.000	
S01.2	Reinforced concrete pipe culvert ( 750 mm. dia.)	lin.m	55	45.000		2475.000	
	<b>S02 Reinforced Concrete Box Culverts, Box Culverts and Pipe Culverts Headwalls, Wingwalls and Aprons (SRP cement)</b>						
	Concrete (Class 28/20), Box Culverts, Box Culverts and Pipe Culverts Headwalls, Wingwalls, Wingwalls and Aprons (SRP Cement), all complete and as detailed on drawing						
S02.1.1	Box culvert 2 x 1 m 1 cell	lin.m	47	60.000		2820.000	
S02.1.2	Box culvert 2 x 1 m 2 cell	lin.m	77	110.000		8470.000	
		8-1		Carried to summary		17265.000	

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 8 - DRAINAGE AND SERVICE DUCTE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
804.1	804 Catch Basins, Catch Pits, Manholes, Curb Inlets, Ditch Inlets and Outlets	n.r.	4		180.000		720.000
	Reinforced concrete catch pit comprising excavation, backfilling, disposal, 100 mm thick plain in-situ sulphate resisting concrete class (12/20) blinding concrete class (24/20) for structure, all complete and as detailed on drawings						
804.2	Catch Pits 1 x 1 x 2 m	lin.m	728		25.000		18200.000
	Reinforced concrete gullies comprising excavation, backfilling, disposal, 150 mm bed and walls of reinforced sulphate resisting concrete class (24/20) all complete and as detailed on drawings						
				8-2	Carried to summary		720.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 8 - DRAINAGE AND SERVICE DUCTS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	805 Water proofing for structure					
805.1	Waterproofing membrane	sq.m.	N/A	1.800		
805.2	Mastic asphalt waterproofing	sq.m.	N/A	8.000		
805.3	Bituminous paint	sq.m.	504	0.350		176.400
	807 Service Ducts					
807.1	Service duct (A.C. 150 mm dia. - 1 way with concrete surround), including duct markers	lin.m.	N/A			
807.1.1	Service duct (A.C. 150 mm dia. - 2 way with concrete surround), including duct markers	lin.m.	77	4.000		308.000
807.2	Extra over for excavation in rock for service ducts	cu.m.	N/A			
				Carried to summary		484.400

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 8 - DRAINAGE AND SERVICE DUCTE

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 8-1					17265.000	
	Page 8-2					720.000	
	Page 8-3					484.400	
				8-4	Carried to summary		18169.400



**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 9 - SLOPE PROTECTION AND STABILISATION**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
<b>900 SLOPE PROTECTION AND STABILISATION</b>							
901	Riprap						
901.2	Mortared stone riprap (Class A), in Irish Crossing	cu.m.	N/A	13.000			
901.2.1	Mortared stone riprap (Class A), other than Irish Crossing	cu.m.	N/A	16.000			
<b>902 Gabions</b>							
902.1	Gabions, 200 mm thick, galvanized steel wire	sq.m	N/A	10.000			
902.1.1	Gabions, 300 mm thick, galvanized steel wire	sq.m	100	14.000			1400.000
906.3	Grouting stone wash checks (type)	lin.m.	N/A				

9-1 Carried to summary 1400.000

CONSTRUCTION OF FLYOVER AT  
 A'NASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 9 - SLOPE PROTECTION AND STABILISATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 9-1					1400.000
				9-2	Carried to summary	1400.000

CONSTRUCTION OF FLYOVER AT  
ANASEEM GARDEN  
BILL OF QUANTITIES  
BILL 11 - BRIDGE BEARINGS, EXPANSION JOINT, JOINTS SEAL AND FILLERS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1100 BRIDGE BEARINGS, EXPANSION JOINT, JOINTS SEALS AND FILLERS						
	1101 Bridge Bearings						
1101.1	Synthetic Rubber Shoe 460 x 360 x 80 mm including anchor bar, cap, filler reinforcing bar, spiral bar and shrinkage mortar	n.r.	242		40.000		9680.000
	1102 Bridge Expansion Joints						
1102.1	Bridge expansion joint Movement Range W=50 mm	m	44		150.000		6600.000
1102.1.1	Bridge expansion joint Movement Range W=100 mm	m	222		280.000		62160.000
			11-1	To Grand Summary			78440.000

**CONSTRUCTION OF FLYOVER AT  
 A'NASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 11 - BRIDGE BEARINGS, EXPANSION JOINT, JOINTS SEAL AND FILLERS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 11-1						78440.000
				11-2	To Grand Summary		78440.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 12 - SIDEWALKS, PAVED AREAS AND CURBS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1200 SIDE WALKS, PAVED AREAS AND CURBS						
	1201 Sidewalks						
1201.1	Interlocking Block Pavement including granular Basecourse 150 mm thick	sq. m	2347		4.000		9388.000
	1202 Curbs						
	All curbs are hydraulically pressed sulphate resisting concrete class A (45/20) graded, jointed and pointed in 10 mm thick sand cement grout, including all necessary excavation, backfill, dispose, formwork and all necessary works for complete						
1202.1.1	Curb 100 x 200 (Mountable)	lin.m.	4392		3.500		15372.000
1202.1.2	Curb 150 x 350 (Mountable)	lin.m	1864		5.000		9320.000
1202.1.3	Curb 150 x 350 (none mountable)	lin.m.	80		4.000		320.000
				12-1	Carried to summary		9388.000

**CONSTRUCTION OF FLYOVER AT  
 ANASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 12 - SIDEWALKS, PAVED AREAS AND CURBS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	<b>SUMMARY</b>  Page 12-1					9388.000
		12-2			Carried to summary	9388.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 13 - SAFETY BARRIERS, DELINEATORS AND FENCES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Ez	R.O.	Ez
	1300 SAFETY BARRIERS, DELINEATORS AND FENCE						
	1301 Corrugated Steel Beam Safety Barrier						
1301.1.1	Safety barrier beam (Type-A) including posts and end anchor	lin.m.	2507		12.000		30084.000
1301.1.2	Safety barrier beam (Type-C) including posts and end anchor	lin.m	1351		13.000		17563.000
	1302 Reflectorised Markers for Safety Barriers						
1303.1	Reflectorised markers attached to guardrail	n.r.	253		8.000		2024.000
1303.2	Reflectorised markers attached to concrete	n.r.	N/A				
		13-1			Carried to summary		49671.000

**CONSTRUCTION OF FLYOVER AT  
 A'NASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 13 - SAFETY BARRIERS, DELINEATORS AND FENCES**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 13-1					49671.000	
				13-2	Carried to summary		49671.000



**CONSTRUCTION OF FLYOVER AT  
ANASEEM GARDEN  
BILL OF QUANTITIES  
BILL 14 - HIGHWAY SIGNS AND ROAD MARKING**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>1400 HIGHWAY SIGNS AND ROAD MARKING</b>						
	<b>1401 Highway Signs</b>						
1401.1	Highway sign, triangular, size (900 mm)	n.r.	9		40.000		360.000
1401.2	Highway sign, circular, diameter (900 mm)	n.r.	11		50.000		550.000
1401.3	Highway sign, rectangular, (600 x 2400, 750 x 1400 mm)	n.r.	18		200.000		3600.000
1401.4	Highway sign, square,	n.r.	4		50.000		200.000
1401.6.1	Overhead sign post and support assembling cantilever	n.r.	4		2,000.000		8000.000
1401.6.2	Overhead sign post and support assembling gantry	n.r.	2		10,000.000		20000.000
						Carried to summary	32710.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEM GARDEN  
BILL OF QUANTITIES  
BILL 14 - HIGHWAY SIGNS AND ROAD MARKING**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
1402	Road Markings						
1402.1	Traffic lines (Mechanically sprayed)	sq. m	2120	1.500		3180.000	
1402.2	Special markings (Hand sprayed)	sq. m	950	5.000		4750.000	
1402.3	Curb painting (Black and yellow)	sq. m	1537	1.600		2459.200	
1402.4	Reflecting road studs	n.r.	1055	4.410		4652.550	
1402.5	Non-reflecting road studs	n.r.	N/A				
1402.6	Reflecting ceramic buttons	n.r.	N/A				
1402.7	Non-reflecting ceramic buttons	n.r.	N/A				
14-2				Carried to summary		15041.750	

**CONSTRUCTION OF FLYOVER AT  
 A'NASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 14 - HIGHWAY SIGNS AND ROAD MARKING**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	SUMMARY						
	Page 14-1						32710.000
	Page 14-2						15041.750
			14-3	To Grand Summary			47751.750

CONSTRUCTION OF FLYOVER AT  
A'NASEM GARDEN  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1500 ELECTRICAL INSTALLATION						
	1502 Medium Voltage Switching Stations						
1502.1	Medium Voltage Switching Stations	n.r.					
	1503 Package Sub-stations						
1503.1	Package sub-station	n.r.					
	1504 Package Medium Voltage Switching Stations						
1504.1	Packing medium voltage switching station	n.r.					
				15-1	Carried to summary		

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1505 33kV and 11kV Pole Mounted Transformer Stations						
1505.1	33kV pole mounted transformer station	n.r.					
1505.2	11kV pole mounted transformer station	n.r.					
	1506 Feeder Pillars						
1506.1	Feeder pillar	n.r.					
	1507 Cables						
1507.1	Cable (type) (size)	lin.m.					
				15-2	Carried to summary		

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
1508.1	1508 Road Lighting Masts and Column High mast assembly (type) (height)	n.r.				
1508.2	Lighting columns (type) (number of arms) (Height)	n.r.				
1509.1	1509 Traffic Sign Illumination Overhead sign lighting (gantry or cantilever ref no)	n.r.				
1509.2	Roadside sign lighting (sign ref no)	n.r.				
1510.1	1510 Recessed Lighting Recessed lighting (type)	n.r.				
				15-3		Carried to summary

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
<b>1511 Traffic Signals</b>							
1511.1	Traffic signal installation (location)	lump sum					
<b>1512 Earthing</b>							
1512.1	Twin rod earthing installation (location)	n.r.					
1512.2	Single rod earthing installation (location)	n.r.					

15-4 Carried to summary

CONSTRUCTION OF FLYOVER AT  
 ANASEM GARDEN  
 BILL OF QUANTITIES  
 BILL 15 - ELECTRICAL INSTALLATION

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 15-1					
	Page 15-2					
	Page 15-3					
	Page 15-4					
	Provisional Sum	Prov Sum				50000.000
				15-5	To Grand Summary	50000.000



CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 17 - UTILITIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	1700 UTILITIES						
	1701 Utilities						
1701.1	Remove carefully and relocate low voltage electric poles, telephone poles, including removal of lines, excavation, backfilling and other related works as directed by the Engineer	prov sum				50000.000	
1701.1.1	Protect of existing utilities crossing the roadway as shown in Drawing, or as directed by the Engineer	lin. m.					
				17-1	Carried to summary	50000.000	

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 17 - UTILITIES

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	SUMMARY					
	Page 17-1	prov sum				50000.000
				17-2	To Grand Summary	50000.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
<b>A. WAGES</b>						
These include proper wages, all used allowance, medical expense and all other charges provided for by local laws						
A.1	Supervisor	hour	100	4.000		400.000
A.2	Site Surveyor	hour	1000	3.500		3500.000
A.3	Foreman	hour	480	3.200		1536.000
A.4	1st Class Operator	hour	480	1.100		528.000
A.5	2nd Class Operator	hour	100	0.950		95.000
A.6	Mechanic	hour	190	1.000		190.000
A.7	Driver	hour	480	1.000		480.000
A.8	Skilled Labour	hour	1000	0.650		650.000
A.9	Semi Skilled Labour	hour	1000	0.600		600.000
				Carried to Summary		7979.000

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
A.10	Ordinary Labour	hour	1000	0.550		550.000	
A.11	Mason	hour	200	0.650		130.000	
A.12	Painter	hour	100	0.750		75.000	
A.13	Carpenter	hour	200	0.650		130.000	
A.14	Steel Fitter	hour	100	0.650		65.000	
A.15	Electrician	hour	20	0.850		17.000	
			19-2	Carried to Summary		967.000	

**CONSTRUCTION OF FLYOVER AT  
A'NASEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
<b>B. OPERATING EQUIPMENT ON SITE</b>						
These rate include : fuel and lubricants cost, charges for depreciation interest, repairs, maintenance, spare parts, tyres, insurance, etc. Payment will not be made for mechanics or maintenance time which shall be include in and spread over the rates.						
B.1	Motorgrader from 100 hp up to 120 hp	hour	5	9.500		47.500
B.2	Motorgrader from 120 hp up to 150 hp	hour	11	11.500		126.500
B.3	Tractor from 60 to 100 hp	hour	5	4.000		20.000
B.4	Bulldozer with ripper from 100 hp to 150 hp	hour	5	7.000		35.000
B.5	Bulldozer with ripper from 150 hp to 200 hp	hour	7	8.000		56.000
B.6	Bulldozer with ripper from 200 hp to 250 hp	hour	6	18.000		108.000
B.7	Bulldozer with ripper from 250 hp to 300 hp	hour	4	19.500		78.000
B.8	Wheel tractor up to 50 hp	hour	10	4.000		40.000
				Carried to Summary		511.000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.9	Wheel tractor over 50 hp	hour	10		7,000		70,000
B.10	Motor scraper capacity up to 18 cu.m.	hour	10		19,000		190,000
B.11	Motor scraper capacity from 18 to 24 cu.m.	hour	10		19,000		190,000
B.12	Sheeps foot roller, from 5 tonnes to 10 tonnes	hour	10		5,000		50,000
B.13	Grid roller	hour	4		7,000		28,000
B.14	Vibratory compactor with prime mover up to 5 tonnes	hour	4		5,000		20,000
B.15	Vibratory compactor with prime mover from 5 to 10 tonnes	hour	4		7,000		28,000
B.16	Pneumatic compactor with prime mover from 30 to 50 tonnes	hour	4		7,000		28,000
B.17	Pneumatic self-propelled rollers from 15 to 20 tonnes	hour	8		4,500		36,000
B.18	Tandem roller up to 8 tonnes	hour	24		4,500		108,000
B.19	Tandem roller from 8 to 12 tonnes	hour	8		5,000		40,000
			19-4	Carried to Summary			788,000

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.20	Triaxle roller from 10 to 15 tonnes	hour	24	5.000		120.000	
B.21	Light frog-rammer 0.1 tonne	hour	20	0.500		10.000	
B.22	Heavy frog-rammer 0.5 tonne	hour	20	0.700		14.000	
B.23	Wheel loader 1.2 to 1.6 cu.m.	hour	20	9.500		190.000	
B.24	Wheel loader 1.6 to 2.0 cu.m.	hour	20	10.000		200.000	
B.25	Wheel loader 2.0 to 2.5 cu.m.	hour	20	11.000		220.000	
B.26	Excavator up to 0.8 cu.m.	hour	15	5.500		82.500	
B.27	Excavator from 0.8 to 1.2 cu.m.	hour	15	7.500		112.500	
B.28	Bituminous mixing plant with batching apparatus up to 80 t/h.	hour	5	18.000		90.000	
B.29	Bituminous mixing plant with batching apparatus from 80 to 150 t/h.	hour	5	23.000		115.000	
B.30	Finisher up to 80 t/h.	hour	10	9.000		90.000	
			19-5	Carried to Summary		1244.000	

**CONSTRUCTION OF FLYOVER AT  
ANASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
B.31	Finisher from 80 t/h to 120 t/h.	hour	10	10,000		100,000
B.32	Bitumen sprayer up to 6 tonnes	hour	10	5,000		50,000
B.33	Tanker truck up to 6 cu.m.	hour	15	5,000		75,000
B.34	Dump truck up to 10 tonnes	hour	17	5,500		93,500
B.35	Dump truck from 10 to 15 tonnes	hour	20	6,000		120,000
B.36	Screening plant from 80 to 100 t/h.	hour	5	16,000		80,000
B.37	Crushing plant from 40 to 60 t/h.	hour	5	20,000		100,000
B.38	Crushing plant with primary and secondary from 60 to 100 t/h.	hour	5	30,000		150,000
B.39	Air compressor up to 6000 l/m.	hour	15	1,500		22,500
B.40	Air compressor over 6000 l/m.	hour	15	2,000		30,000
B.41	Mechanical broom	hour	7	4,000		28,000
			19-6	Carried to Summary		849,000



CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.42	Power water pump	hour	118	0.700		82.600	
B.43	Steel cutting machine	hour	5	0.800		4.000	
B.44	Steel bending machine	hour	5	1.200		6.000	
B.45	Belt conveyer	hour	5	7.000		35.000	
B.46	Concrete mixer up to 0.5 cu.m.	hour	10	2.000		20.000	
B.47	Concrete mixer over 0.5 cu.m.	hour	12	4.000		48.000	
B.48	Automatic concrete batch plant without mixing drum	hour	5	7.500		37.500	
B.49	Transmixer up to 5 cu.m.	hour	10	6.500		65.000	
B.50	Concrete vibrators	hour	59	0.150		8.850	
B.51	Crane up to 5 tonnes.	hour	9	4.500		40.500	
B.52	Crane with broom and jib 5 to 10 tonnes	hour	7	8.000		56.000	
			19-7	Carried to Summary		403.450	

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
B.53	Crane with boom and jib over 10 tonnes	hour	7	11.000		77.000	
B.54	Generator 60 kw	hour	5	1.500		7.500	
B.55	Generator 75 kw	hour	5	1.800		9.000	
B.56	Drilling equipment	hour	5	0.200		1.000	
B.57	Generator 100 kw	hour	5	3.000		15.000	
B.58	Generator 150 kw	hour	5	4.000		20.000	
B.59	Generator 200 kw	hour	5	5.000		25.000	
B.60	Gravel strewer	hour	5	10.000		50.000	
			19-8	Carried to Summary		204.500	

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount
				R.O.	Bz	
	<b>C. MATERIALS</b>					
	These rates include all the charges for the supply of the materials, loading, transport to site, unloading and stores as well as all the charges provided for in the General and Special Specifications and in the Contract.					
C.1	Aggregate for granular sub-base course in accordance with the General and Special Specifications, in place as specified.	cu.m.	50	1.000		50.000
C.2	Aggregate for granular aggregate base course in accordance with the General and Special Specifications, in place as specified.	cu.m.	25	2.000		50.000
C.3	Aggregate for bituminous base course in accordance with the General and Special Specifications, near the asphalt plant, in bulk	cu.m.	50	2.000		100.000
C.4	Fine aggregate for concrete, in accordance with the General and Special Specifications, in place, in bulk	cu.m.	25	2.000		50.000
C.5	Coarse aggregates for concrete, in accordance with the General and Special specifications, in place, in bulk	cu.m.	50	1.200		60.000
					Carried to Summary	310.000
		19-9				

**CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS**

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
C.6	Stone for drainage, masonry and slope protection, in accordance with the General and Special Specifications in place	cu.m.	25		2.500		62.500
C.7	Asphalt cement, grade 60-70 on site	ton	1		44.000		44.000
C.8	Asphalt cement, grade 50-60 on site	ton	1		48.000		48.000
C.9	Emulsified asphalt, grade RS-1 on site	ton	1		70.000		70.000
C.10	Cutback asphalt, MC and RC type on site	ton	1		75.000		75.000
C.11	Portland cement on site	ton	1		25.000		25.000
C.12	Deformed billet steel bars, AASHTO M 31 grade 60 (High Yield) of any diameter	ton	1		135.000		135.000
C.13	Deformed billet steel bars AASHTO M 31 grade 40 (Mild) of any diameter	ton	1		135.000		135.000
C.14	Highway signs	sq.m.	3		32.000		96.000
C.15	Highway sign supports - 1 post	nr.	4		15.000		60.000
			19-10		Carried to Summary		750.500

CONSTRUCTION OF FLYOVER AT  
A'NASEEM GARDEN  
BILL OF QUANTITIES  
BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
C.16	Highway sign supports - 2 post	nr.	2		20.000		40.000
C.17	Timber plank, on site	cu.m.	2		105.000		210.000
C.18	Timber props, on site	cu.m.	2		105.000		210.000
C.19	Wire mesh gabgrions, on site	ton	0.5		320.000		160.000
C.20	Explosive, on site	kg.	5		20.000		100.000
C.21	Gas oil, on site	litre	100		0.080		8.000
C.22	Gasoline, on site	litre	500		0.120		60.000
C.23	Lubricant	kg.	5		0.300		1.500
			19-11		Carried to Summary		789.500

CONSTRUCTION OF FLYOVER AT  
 ANASEEM GARDEN  
 BILL OF QUANTITIES  
 BILL 19 - DAYWORKS

Item No	Description	Unit	Estimated Quantity	Unit Rate		Amount	
				R.O.	Bz	R.O.	Bz
	<b>SUMMARY</b>						
	Page 19-1					7979,000	
	Page 19-2					967,000	
	Page 19-3					511,000	
	Page 19-4					788,000	
	Page 19-5					1244,000	
	Page 19-6					849,000	
	Page 19-7					403,450	
	Page 19-8					204,500	
	Page 19-9					310,000	
	Page 19-10					750,500	
	Page 19-11					789,500	
				19-12	To Grand Summary		14795,950

**BILL OF QUANTITIES**

**GRAND SUMMARY**

Bill No	Description	Amount
		R.O.
1	Preliminaries	423590.000
2	Earthworks	126927.300
3	Granular and stabilized subbase, basecourse and stabilized subgrade	37036.800
4	Bituminous Pavement	217995.200
5	Concrete and concrete structure	1384000.000
6	Structural steel and other metal work	104400.000
7	Paint	N/A
8	Drainage and service ducts	18469.400
9	Slope protection and stabilization	1400.000
10	Piling	N/A
11	Bridge bearing, expansion joints, joint seals and fillers	78440.000
12	Sidewalks, paved areas and kerbs	9388.000
13	Safety barriers, delineators and fences	49671.000
14	Highway signs and road marking	47751.750
15	Electrical installations	50000.000
16	Landscape and irrigation	N/A
17	Utilities	50000.000
18	Plant and Equipment	N/A
19	Dayworks	14795.950
	Sub-total	2613865.400
	Contingencies (10%)	261386.540
	<b>TOTAL CONTRACT VALUE (R.O)</b>	<b>2875251.940</b>

(IN WORDS, THE TOTAL TENDER VALUE IS RIAL OMANI)

NAME OF TENDERER

DATE

-----  
SIGNATURE OF TENDERER







